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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/820,047	03/28/2001	Yoshihiko Seyama	3531.65364	3083

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EXAMINER

CAO, ALLEN T

ART UNIT	PAPER NUMBER
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2652

DATE MAILED: 07/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action
Before the Filing of an Appeal Brief**

Application No.

09/820,047

Applicant(s)

SEYAMA ET AL.

Examiner

Allen T. Cao

Art Unit

2652

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 15 June 2005 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 5 months from the mailing date of the final rejection.
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ They raise the issue of new matter (see NOTE below);
(c) ☒ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: _____.
Claim(s) objected to: 2.
Claim(s) rejected: 1,3-8,15 and 16.
Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See Continuation Sheet.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____
13. ☒ Other: See an attached Office Action.



Allen Cao
Primary Examiner

Continuation of 3. NOTE: The phrases "the term "maximum resistance change rate" and the tem "maximum resistance change amount" is the maximum resistance minus the minimum resistance" in REMARKS, page 6, lines 10-16 and the phrase "change rate or resistance change amount ... (i.e., the present invention is a CPP structure)" in REMARKS, page 8, lines 1-8 are not persuasive to the claims languages.

Continuation of 11. does NOT place the application in condition for allowance because: The proposed amendment will not be entered (see NOTE) and the final rejection stands.

1. In the REMARKS, Applicant asserts that:

“ ... Additionally, the Examiner also appears confused by the use of the terms perpendicular to the plane structure” (CPP) and the phrase “current in an in-plane direction” in Claim 15. Claim 15 does not recite that the sensor has both a CPP structure and a CIP (“current in plane”) structure. Instead, this claim recites that the sensor has a CPP structure, but the thickness of the magnetoresistive film is selected to be larger than that providing the maximum resistance change rate or the maximum resistance change amount when passing a current in the in-plane direction (as if it were a CIP structure)...”.

The Examiner maintains that the 112(2) rejection is proper as set forth in the previous Office Action because: the phrases “the thickness ... larger than that” and “as if it were a CIP structure” of the phrase “the thickness of the magnetoresistive film is selected to be larger than that providing the maximum resistance change rate or the maximum resistance change amount when passing a current in the in-plane direction (as if it were a CIP structure)” are vague and indefinite. Firstly, the phrase “the thickness ... larger than that” is vague and indefinite because it does not clearly teach what is the thickness of the film. It lacks of metes and bounds of the claimed invention. Secondly, the phrase “... or resistance change amount in **the case of passing a current in an in-plane direction (as if it were a CIP structure)**”, emphasis added, is vague and indefinite because the phrases “in case of” or “as if it were” are lack of metes and bounds of the claimed invention and how it (CIP structure) can be compared to CPP structure. Here, Applicant’s invention structure is a CPP not a CIP.

2. Applicant also asserts that Dykes et al fails to disclose the magnetoresistive film thickness range defined in independent Claim 15.

The Examiner respectfully points out that Applicant does not define any thickness range. Applicant only claims "the thickness of the magnetoresistive film is selected to be larger than that providing the maximum resistance change rate or the maximum resistance change amount when passing a current in the in-plane direction"; wherein, "the term "maximum resistance change rate" is arrived at by the following formula: $(\text{maximum resistance} - \text{minimum resistance}) / (\text{minimum resistance}) \times 100 \%$. The "maximum resistance change amount" is the maximum resistance minus the minimum resistance", as defined by Applicant.

Dykes et al inherently disclose that the "magnetoresistive film (claim 15) or free layer or pinned layer (claim 16) has a thickness larger than that providing a maximum resistance change rate or resistance change amount in the case of passing a current in an in-plane direction"; see discussion in column 4, lines 10-20 and column 5, line 60 to column 6, line 7. Additionally, Dykes et al inherently disclose that the MR film thickness "larger than" that "providing a maximum resistance change rate" or "resistance change amount" in the case of passing a current in an in-plane direction by Applicant's broadly claimed language as. Applicant does not claim any range of the thickness, thus, any film of films as set forth of Dykes et al inherently has a maximum resistance and a minimum resistance; therefore, it is inherently satisfied the limitation "maximum resistance change rate"; wherein, the "maximum resistance change rate" is arrived at by the following formula: $(\text{maximum resistance} - \text{minimum resistance}) / (\text{minimum resistance}) \times 100 \%$

Art Unit: 2652

and wherein the "maximum resistance change amount" is the maximum resistance minus the minimum resistance", as defined by Applicant.

Therefore, the Examiner maintains that the rejection is proper.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen T. Cao whose telephone number is (571) 272-7569. The examiner can normally be reached on Mon - Thurs (7:30 - 6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Allen Cao
Primary Examiner

AC
June 30, 2005